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**TECHNICAL SUPPORT DOCUMENT
AND STATEMENT OF BASIS
FOR TUCSON ELECTRIC POWER COMPANY - Springerville Generating Station**

May 3, 1999

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Permit No. 1000105

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**TECHNICAL REVIEW AND EVALUATION
OF APPLICATION FOR
AIR QUALITY TITLE V PERMIT NO. 1000105**

Tucson Electric Power Company- *Springerville Generation Station*

I. INTRODUCTION

This Title V permit is for the operation of Tucson Electric Power Company (TEP) - Springerville Generating Station (SGS), located in Apache County, approximately 15 miles North of Springerville, Arizona. TEP-SGS presently consists of power generating equipment and support services. It is a coal fired electric generating facility.

A. Company Information

Facility Name:	Tucson Electric Power Company Springerville Generation Station
Mailing Address:	220 West Sixth Street, P.O. Box 711 Tucson, AZ 85702-0711-01
Facility Location:	10 miles north of Springerville on Highway 666; 12 miles east on site access Road, Springerville, Apache County, AZ

B. Attainment Classification (Source: 40 CFR §81.303)

The TEP-SGS is located in an area which is designated by the Environmental Protection Agency (EPA) as an attainment area for all criteria pollutants.

II. PROCESS DESCRIPTION

TEP - SGS is a steam electric generating station. The Standard Industrial Code (SIC) is 4911. TEP-SGS consists of two coal-fired steam generating units. The two steam generating units are rated to produce a combined electrical output of approximately 760 net megawatts. The facility is operated 24 hours a day and 365 days a year. The plant also has an auxiliary boiler which is used for cold start-up for the two steam generating units.

The power generating facility consists of fuel handling systems, two steam generating units, and ash handling systems. Coal is delivered to the site by train. Coal is unloaded by means of rotary car dumper at a rate of approximately 3000 tons per hour. Coal is transferred for storage via the covered conveyor belts. Dust collection and suppression systems are utilized at coal transfer points. Fuel oil is delivered by train or truck and is stored in storage tanks.

Steam generating units 1 and 2 normally burn coal; the plant has a capacity to process 5,272,000 tons of coal per year. Steam is supplied to turbine generator sets. Both units 1 and 2 each provide 2,890,000 pounds of steam per hour at 2625 psig at 1005 ° F. The steam turbines are tandem

compound reheat turbines with single opposed flow HP-IP rotors and dual double flow low pressure turbines mounted on a single shaft rotating at a rated speed of 3,600 revolutions per minute. The turbines for units 1 and 2 are designed to operate with main steam of 2400 psig at 1005 ° F and reheated to 1005 ° F with steam exhausting to a condenser.

Mechanical induced draft cooling towers are used to remove heat from the main condenser circulating water systems.

Each steam generating unit is equipped with a filter baghouse for particulate collection. Spray Dry Absorbers(SDA) are used to control SO₂. Low NO_x burners, overfire air ports and good operating practices control NO_x emissions.

The ash disposal system handles fly ash from both units. Fly ash from the filter baghouse is transferred via a pneumatic system to the fly ash silos. Bottom ash is removed from the boiler and transferred by conveyor pipes to a dewatering bins. Both fly ash and bottom ash are hauled to the ash burial area located on site.

TEP's Springerville Generating Station currently has the capability of burning coal, fuel oil and used oil. Typical operating scenarios will reflect operating at a capacity factor of zero to 100% for the electric generating units. Table 2 summarizes the normal and alternate operating scenarios at the Springerville Generating Station. Data from the emission sources forms shows that TEP - SGS emits more than 100 tons per year (tpy) of all criteria pollutants (except lead).

Table 1: Operating Scenarios

Source	Normal Operating Scenarios	Alternate Operating Scenarios
Steam Unit 1	Coal (1A)	
		Duel fuel: fuel oil and coal (1B)
		Duel fuel: Used oil (<1% of the total daily heat input) and coal (1C)
Steam Unit 2	Coal (2A)	
		Duel fuel: fuel oil and coal (2B)

III. EMISSIONS

The SGS is capable of operating under different scenarios as outlined in Section II (Table 1) above. Typical operating parameters of the steam generating units and auxiliary boiler are given in Table 2.

Table 2 Typical Operating Parameters

	Unit 1 Boiler	Unit 2 Boiler	Auxiliary Boiler	Plant Total
Max. Annual proc. rate	25,316,400,000 lb steam	25,316,400,00 lb steam	727,080,000 lb steam/hr	51,359,880,000 lb steam/hr

	Unit 1 Boiler	Unit 2 Boiler	Auxiliary Boiler	Plant Total
Rated Production rate	425 MW (gross) 380 MW (net)	425 MW (gross) 380 MW (net)	113 MMBtu/hr	850 MW (gross) 760 MW (net)
Max. Yearly usage	Coal: 2,635,884 Ton/Yr Oil: 1,000,000 Gal/Yr	Coal: 2,635,884 Ton/Yr Oil: 1,000,000 Gal/Yr	Oil: 7,008,000 Gal/Yr	Coal: 5,271,768 Ton/Yr Oil: 9,008,000 Gal/Yr
Max. Hourly Usage	Coal: 601,800 Lb/Hr Oil: 4,388 Gal/Hr	Coal: 601,800 Lb/Hr Oil: 4,388 Gal/Hr	Oil: 800 Gal/Hr	Coal: 1,203,600 Lb/Hr Oil: 9,576 Gal/Hr
Average Hourly Use	Coal: 401,200 Lb/Hr Oil: 2,200 Gal/Hr	Coal: 401,200 Lb/Hr Oil: 2,200 Gal/Hr	Oil: 373 Gal/Hr	Coal: 802,400 Lb/Hr Oil: 4,773 Gal/Hr
Higher Heating Value	Coal: 9,500 Btu/lb Oil: 19,900 Btu/lb	Coal: 9,500 Btu/lb Oil: 19,900 Btu/lb	Fuel Oil: 19,900 Btu/lb Normal (#2 fuel oil)	N/A
Potential Sulfur Content	Coal: 2.0% max 0.7% normal Oil: 0.5% max 0.3% normal	Coal: 2.0% max 0.7% normal Oil: 0.5% max 0.3% normal	Oil: 0.5% max 0.3% normal	N/A
Potential Ash Content	Coal: 35% max 18% normal Oil: 0.02% max, trace% normal	Coal: 35% max 18% normal Oil: 0.02% max, trace% normal	Oil: 0.02% max, trace% normal	N/A

Table 4 summarizes the potential to emit (PTE), allowable emissions, test results, and the actual emissions for these units. The emission factors used to calculate the potential to emit are from AP-42 (1/95 ed.) and test data. Coal is sub bituminous coal. Fuel oil is #2 fuel oil for calculation. TEP, in its application, stated that the waste oil they use is similar to No. 4 fuel oil. The allowable emissions are calculated using the standards under EPA Approval to Construct of December 21, 1977, A.A.C. R18-2-724, and other applicable rules. The HAPs emissions calculations are located in the permit application.

The formula used to calculate uncontrolled emissions from the units burning fuel oil is as follows:

$$\text{Emissions (tpy)} = [\text{Emission Factor (lb/1000 gal)}] \times [\text{Oil/Waste Oil Usage (gal/hr)}] \times [\text{8760 (hr/yr)}] / [\text{2000 (lb/ton)}]$$

The formula used to calculate the uncontrolled emissions from units burning coal is as follows:

$$\text{Emissions (tpy)} = [\text{Emission Factor (lb/ton)}] \times [\text{Max. Coal Usage (ton/yr)}] / [2000 \text{ (lb/ton)}]$$

Potential emissions from the TEP-SGS are presented in the following table. They may be used for the following purposes:

- (i) Ascertaining “major source” status of the TEP-SGS;
- (ii) Comparing source potential-to-emit with emission rates allowable by relevant standards; and
- (iii) Comparing source potential-to-emit with emissions inventory and test data.

This comparison serves as a summary of existing information on emissions from the SGS. These emissions figures (except for the ALLOWABLE emissions) are **not** meant to be emissions limitations of any form.

Table 3: Comparison among PTE, Allowable Emissions, Test Data, and Actual Emissions from Emission Inventory (EI)

Unit	Pollutant	PTE (tpy)	Allowable (tpy)	Test Data (tpy) ⁽⁴⁾	Actual Emission from EI 1996 (tpy)
Unit 1 Boiler (Coal)	PM	527 ⁽¹⁾	851	510	128
	SOx	3,505 - 10,517 ⁽⁶⁾	17,278	16,376	10,215
	NOx	11,018 ⁽⁵⁾	17,453	11,018	6,956
	VOCs	52	n/a	n/a	33
	CO	659	n/a	n/a	418
Unit 2 Boiler (Coal)	PM	527 ⁽¹⁾	851	376	222
	SOx	3,505 - 10,517 ⁽⁶⁾	17,278	16,101	10,490
	NOx	8,589 ⁽⁵⁾	17,453	8,589	6,545
	VOCs	53	n/a	n/a	34
	CO	659	n/a	n/a	424
Unit 1 Boiler (Fuel oil)	PM	0.27 ⁽¹⁾	851	n/a	n/a
	SOx	432 - 144 ⁽⁶⁾	17,278	n/a	n/a
	NOx	807	17,453	n/a	n/a
	VOCs	15	n/a	n/a	n/a
	CO	96	n/a	n/a	n/a

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Unit	Pollutant	PTE (tpy)	Allowable (tpy)	Test Data (tpy) ⁽⁴⁾	Actual Emission from EI 1996 (tpy)
Unit 2 Boiler (Fuel oil)	PM	0.27 ⁽¹⁾	851	n/a	n/a
	SOx	432 - 144 ⁽⁶⁾	17,278	n/a	n/a
	NOx	807	17,453	n/a	n/a
	VOCs	15	n/a	n/a	n/a
	CO	96	n/a	n/a	n/a
Unit 1 Boiler (Used Oil) (Maximum 100,000 gal/yr)	PM	0.35	851	n/a	n/a
	SOx	7.5	17,278	n/a	n/a
	NOx	2.1	17,453	n/a	n/a
	VOCs	0.04	n/a	n/a	n/a
	CO	0.25	n/a	n/a	n/a
Auxiliary Boiler (Fuel oil #2)	PM	0.018 ⁽¹⁾	0.0198	n/a	n/a
	SOx	197	n/a	n/a	n/a
	NOx	70	n/a	n/a	n/a
	VOCs	0.9	n/a	n/a	n/a
	CO	17	n/a	n/a	n/a
Coal Preparation Plant	PM	37 ^{(1), (2), (3)}	n/a	n/a	n/a
Ash Handling	PM	46 ^{(1), (2), (3)}	290	n/a	n/a
Lime handling operations	PM	135 ⁽³⁾	225	n/a	19
Cooling tower 1	PM	n/a	598	n/a	n/a
Cooling tower 2	PM	n/a	598	n/a	n/a

Note:

- ⁽¹⁾ Baghouse removal efficiency is 99.8%.
- ⁽²⁾ Calculation can be found in the permit application.
- ⁽³⁾ Emissions from coal preparation plant, ash handling and lime handling operations are aggregate of all operation emission points.
- ⁽⁴⁾ Test data is a maximum of test results in 1994, 1995, 1996, and 1997.
- ⁽⁵⁾ The results indicate the emissions greater than the PTE; hence PTE has been replaced with the test data.
- ⁽⁶⁾ This is calculated using 0.7% S in coal, 0.5% S in the oil, and 70-90% removal efficiency of a dry scrubber.
- n/a Not available

IV. COMPLIANCE HISTORY**A. Inspections**

Inspections are being regularly conducted on this source to ensure compliance with the permit. Table 5 summarizes the recent inspections that have been conducted on the source and the results of the inspections.

Table 4: Inspection Results

Inspection Date	Type of Inspection	FAR No.	Results
09/17/97	Routine	AQD-NRO-18084	Routine unannounced inspection indicated all emissions from Unit 1 were below the standards.
12/12/96	Complaint # 3752 & 3792	AQD-NRO-16xx	No violation was observed.
11/15/96	Complaint	AQD-NRO-16401	No violation was observed.
10/10/96	Routine	AQD-NRO-16193	Routine inspection indicated all emissions from both units were below the standards.
08/29/96	Routine	AQD-NRO-16008	Routine unannounced inspection indicated all emissions from both units were below the standards.
09/03/96	Level 2	15998	Performance test and routine inspection were combined. All CEMS indicated emissions were below standards.
06/24 -27/96	Routine	15668	Performance test and routine inspection were combined. All CEMS indicated emissions were below standards.
02/29/96	Level 3	15025	Performance test and routine inspection were combined. All CEMS indicated emissions were below standards.
10/31 - 11/2/95	Routine	14104	Performance test and routine inspection were combined. All CEMS indicated emissions were below standards.
11/15/94	Routine	AQD-NRO-11734	Inspection of Unit 1, 40 CFR Part 75 Certification
11/16/94	Routine	AQD-NRO-2582	Inspection of Unit 1, 40 CFR Part 75 Certification
11/21/94	Routine	AQD-NRO-11735	Inspection of Unit 2, 40 CFR Part 75 Certification
01/24/92	Follow-up on NOV	OAQ:CU:8980	NOV dated August 12, 1991 for increased exceedances of stack SO2 emission limits. Inspection indicated emissions were below the standards.

07/29/93	Response to potential modifications	AQD-NRO-2442	Inspection indicated that the change could be a significant revision. Follow-up investigation indicated that a significant revision was not required.
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B. Excess Emissions

TEP-SGS has reported excess visible emissions and SO₂ emissions since 1994. The primary cause of the excess emissions are air pollution control malfunction. Other causes include start-up, routine maintenance, repair activities, etc. The Permittee remedied the excess emissions promptly.

C. Testing

The results of the latest compliance tests have been summarized in Table 6. Results show that the units are in compliance with the applicable standards.

Table 5: Test Results

Equipment Tested		Pollutants Tested			Results
UNIT 1	Pollutants	PM	NO _x	SO ₂	
	Limit	0.034 lbs/MMBtu	0.697 lb/MMBtu	0.690 lb/MMBtu	
	<u>Tested</u>				
	11/16 & 21, 94	0.0204	0.3256	0.5020	Pass
	11/1-2/95	0.013	0.373	0.655	Pass
	02/29/96	0.009			Pass
	06/24-27/96	0.009	0.309	0.524	Pass
	06/9-12/97	0.009	0.440	0.654	Pass
	05/18/98 & 06/29-30/98	0.006	0.416	0.626	Pass
UNIT 2	Pollutants	PM	NO _x	SO ₂	
	Allowable	0.034 lbs/MMBtu	0.697 lb/MMBtu	0.690 lb/MMBtu	
	<u>Tested</u>				
	11/16 & 21, 94	0.0145	0.3434	0.5021	Pass
	02/29/96	0.009			Pass
	06/24-27/96	0.015	0.339	0.522	Pass
	08/28/96	0.002			Pass

	06/9-12/97	0.006	0.317	0.643	Pass
	05/18/98 & 06/29-30/98	0.007	0.334	0.597	Pass

D. Consent Judgement

On or about July 13, 1993, TEP's Unit 2 violated the requirements of the Approval to Construct by exceeding the limitation for particulate emissions as defined in the Approval to Construct. From June 24, 1993, until September 21, 1993, TEP violated a permit requirement of the Permits by allowing ambient air monitoring equipment to be non-operational.

On September 12, 1995, A Consent Judgment (CJ) No. CV 95-14857 was issued to TEP-Springerville coal-fired electric generating station. TEP was required to pay a civil penalty, provide to ADEQ a contingency plan for ambient air monitoring equipment, provide a plan to reduce opacity exceedances at Unit 2 of the facility, and complete four consecutive quarters of particulate mass loading compliance testing. TEP has satisfied all terms of the CJ. The order of terminating CJ has been issued on December 3, 1996.

E. Compliance Certifications

TEP has stated in Sections 16 and 17 of the permit application that it operates all emission units in compliance with applicable requirements and will continue to comply with all applicable requirements under the existing operating permits. In addition, TEP will comply with all other applicable requirements that become effective during the term of the permit as required by the Arizona Administrative Code.

V. APPLICABLE REGULATIONS VERIFICATION

The Permittee has identified all applicable regulations that apply to each operating unit identified in the permit application. Table 7 summarizes the findings of the Department with respect to the applicability or non-applicability of these regulations. (Installation Permits and other previous permit conditions are discussed under Section VI of this technical review document.)

Table 6: Applicable Regulations Verification

Unit ID	Applicable Regulations	Verification
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Unit 1 Boiler	<p>EPA Approval to Construct (December 21, 1977) conditions VII, IX, X, XI, XII, and XIII.</p> <p>40 CFR 60.42(a) 40 CFR 60.43 (a) A.A.C. R18-2-903.1 A.A.C. R18-2-903.2 40 CFR 60.43(c) 40 CFR 60.44(a) 40 CFR 60.44(b) 40 CFR 60.45(a) 40 CFR 60.45(c) 40 CFR 60.45(e) 40 CFR 60.45(f) 40 CFR 60.45(g) 40 CFR 60.46(a) 40 CFR 60.46(b) 40 CFR 60.46(c) 40 CFR 60.46(d) 40 CFR 72 40 CFR 73 40 CFR 75</p>	<ul style="list-style-type: none"> - The units commenced construction after August 17, 1971 and are greater than 73 MW capacity. There are standards for PM, SO₂, NO_x and Opacity. - NSPS 40 CFR 60.42, 60.43, 60.44 have the following emission limits: $PM \leq 0.10 \text{ lb/MMBtu}$ $Opacity \leq 20\%$ except for one six-minute period per hour of not more than 27%. $SO_x \leq 0.8 \text{ lb/MMBtu}$, SO_x allowance system. $Nox \leq 0.7 \text{ lb/MMBtu (coal)}$, $NO_x \leq [w(260) + x(86) + y(130) + z(300)]/(w + x + y + z)$ for combination fuels - Condition XIII of EPA Approval to Construct (Approval) has the following emission limits: $PM: 0.034 \text{ lb/MMBtu}$, $SO_2: 0.690 \text{ lb/MMBtu}$, $NO_x: 0.697 \text{ lb/MMBtu}$, $Opacity 15\%$. <p>The emission limits in the Approval are more stringent than NSPS limits. ADEQ is hereby streamlining the emission standards for opacity, PM, NO_x and SO₂. Therefore, the emission limits from this Approval will be incorporated into the Title V permit.</p>
Unit 2 Boiler	<ul style="list-style-type: none"> - EPA Approval to Construct (December 21, 1977) conditions VII, IX, X, XI, XII, and XIII. - 40 CFR 60.42(a) 40 CFR 60.43 (a) A.A.C. R18-2-903.1 A.A.C. R18-2-903.2 40 CFR 60.43 (c) 40 CFR 60.44(a) 40 CFR 60.44(b) 40 CFR 60.45(a) 40 CFR 60.45(c) 40 CFR 60.45(e) 40 CFR 60.45(f) 40 CFR 60.45(g) 40 CFR 60.46(a) 40 CFR 60.46(b) 40 CFR 60.46(c) 40 CFR 60.46(d) 40 CFR 72 40 CFR 73 40 CFR 75 	<ul style="list-style-type: none"> - The units commenced construction after August 17, 1971 and are greater than 73 MW capacity. There are standards for PM, SO₂, NO_x and Opacity. - NSPS 40 CFR 60.42, 60.43, 60.44 have the following emission limits: $PM \leq 0.10 \text{ lb/MMBtu}$ $Opacity \leq 20\%$ except for one six-minute period per hour of not more than 27%. $SO_x \leq 0.8 \text{ lb/MMBtu}$, SO_x allowance system. $Nox \leq 0.7 \text{ lb/MMBtu (coal)}$, $NO_x \leq [w(260) + x(86) + y(130) + z(300)]/(w + x + y + z)$ for combination fuels - Condition XIII of EPA Approval to Construct (Approval) has the following emission limits: $PM: 0.034 \text{ lb/MMBtu}$, $SO_2: 0.690 \text{ lb/MMBtu}$, $NO_x: 0.697 \text{ lb/MMBtu}$, $Opacity 15\%$. <p>The emission limits in the Approval are more stringent than NSPS limits. ADEQ is hereby streamlining the emission standards for opacity, PM, NO_x and SO₂. Therefore, the emission limits from this Approval will be incorporated into the Title V permit.</p>
Auxiliary Boiler	<p>A.A.C. R18-2-724.A A.A.C. R18-2-724.B A.A.C. R18-2-724.C.1 A.A.C. R18-2-724.E A.A.C. R18-2-724.G A.A.C. R18-2-724.J A.A.C. R18-2-724.K</p>	<p>The heat input of this unit is 157 MMBtu/hr (< 250 MMBtu/hr) and the date of construction is prior to the trigger date (6/9/89) for 40 CFR 60, Subpart Da. Hence, this unit is subject to R18-2-724. The unit is subject to an opacity standard of 15% and a SO_x standard of 1.0 lb/MMBtu.</p> <p>$PM: E = 1.02Q^{0.769}$</p>

Coal Handling System	40 CFR 60.252(c)	The process is more than 200 tons per day and the date of construction is after October 24, 1974. Therefore, the coal preparation plant triggers 40 CFR 60, Subpart Y. This system is subject to an opacity standard of 20%.
Ash Handling	A.A.C. R18-2-702.B A.A.C. R18-2-730.A.1.b	The ash handling is subject to the particulate matter standard under A.A.C. R18-2-730 and the general visible emissions standard.
Lime Preparation Plant	A.A.C. R18-2-702.B A.A.C. R18-2-730.A.1 A.A.C. R18-2-730.B	Since TEP-SGS only handles lime, it is subject to particulate matter standard and the general visible emissions standard.
Cooling Towers 1 and 2,	A.A.C. R18-2-702.B A.A.C. R18-2-730.A.1 A.A.C. R18-2-730.B	Since chromium-based water treatment chemicals are not used, the cooling towers are subject to the particulate matter in A.A.C. R18-2-730 and the general visible emissions standard.
Solvent Cleaners/ Degreasers	A.A.C R18-2-730.F	Periodic activity
Spray Painting	A.A.C. R18-2-727 A.A.C. R18-2-702(B) SIP Provision R9-3-527.C	Periodic activity
Abrasive Sand Blasting	A.A.C. R18-2-726 A.A.C. R18-2-702(B)	Periodic activity

VI. PREVIOUS PERMITS AND CONDITIONS

A. Previous Permits

An *Approval to Construct* for the two units was issued by EPA on December 21, 1977. Another *Approval to Construct* was issued by EPA on April 11, 1980 for a third unit. However, the third unit was never constructed.

Table 7: Previous Permits

Date Permit Issued	Permit #	Application Basis
The effective date of this permit shall be the date the initial Title V permit becomes effective, or January 1, 2000, whichever is earlier	1000662	Significant Revision to include the Title IV (Acid Rain) Provision.
12/08/95	1000261	Administrative Amendment
10/19/95	1000214	Administrative Amendment
5/25/95	1000140	Administrative Amendment
12/19/94	M010060P4-99	Operating Permit - Renewal of 0316-89

03/03/88	0361-89	Operating Permit
03/03/88	1205	Installation permit
12/30/86	0345-87	Operating Permit
04/11/80	Approval to Construct /Modify a Stationary Source issued by EPA	
12/16/85	0347-86	Operating permit
12/21/77	Approval to Construct /Modify a Stationary Source issued by EPA	
08/26/77	1106	Installation permit

B. Previous Permit Conditions

1. Approval to Construct/Modify a Stationary Source (PSD Permit)

This Approval was issued on 12/21/77 to TEP to construct two (2) 350 megawatt coal-fired steam electric generating units near Springerville, Arizona.

The following conditions have been carried over into permit #1000105.

a. Emission Limits/Standards

Section XIII of this permit includes limitations that are more stringent than 40 CFR 60 Subpart D and are the following:

“None of the steam generators shall cause to be discharged into the atmosphere emissions in excess of the following:

<u>Pollutants</u>	<u>Limitations</u>
<i>Particulate</i>	<i>0.034 lb/MM Btu</i>
<i>Sulfur dioxide</i>	<i>0.690 lb/MM Btu</i>
<i>Nitrogen Oxides</i>	<i>0.697 lb/MM Btu</i>
<i>Opacity</i>	<i>15 percent”</i>

The Approval did not provide the exemption for the startup, shut down, and malfunction. However, as we know, even careful and prudent planning and design cannot totally eliminate infrequent short periods of excesses during startup and shutdown. Therefore, the exemptions for startup, shutdown, and malfunction have been given in this Title V permit.

b. Air Pollution Controls

Section X of this permit requires the Permittee to have controls for fugitive emissions at the following:

“The permittee must comply with the following conditions to control fugitive dust at the plant site:

- (1) the coal handling system shall have a spray application system in the coal receiving and storage areas.*
- (2) the coal handling system shall have dust collectors at the transfer points between the coal storage area and the furnace.*
- (3) Bottom ash shall be conveyed hydraulically from the plant to dewatering bins where water is reduced to 20% by volume before being trucked to the ash burial area.*
- (4) Fly ash shall be collected from the economizer and precipitator hoppers and transferred pneumatically in a pipe to the fly ash silos. The conveying air to be exhausted from the silo shall be discharged to the atmosphere through a dust collector.”*

(Note: the precipitator is never installed. TEP installed baghouses instead. This condition has been modified in the Title V permit. See Attachment B, Section II.D of permit #1000105)

c. Coal Sampling

Section XI of this permit requires the Permittee to sample the coal before entering the boilers:

“Coal shall be sampled before entering the boilers for moisture, ash, sulfur content, and gross calorific value. The results of three analyses shall be retained for at least two years following the date of measurements.”

d. Ambient Air Monitoring

Section XII of this permit requires the Permittee to establish a monitoring network:

“A monitoring network shall be established by the applicant to verify compliance with the Ambient Air Quality Standard and the maximum allowable pollutant concentration increases.”

All other conditions included in this installation permit have been included in permit #1000105 through the incorporation of other applicable requirements (See section V and the remainder of section VI).

2. Installation Permit Number 1106

This installation permit was issued to TEP-SGS on August 26, 1977 to install three identical steam electric, coal fired, electric generating station designed to produce a total of 1050 MW net output.

All other conditions included in this installation permit have been included in permit #1000105 through the incorporation of other applicable requirements (See section V and the remainder of section VI).

3. Permit Number 0347-86

This operating permit was issued to TEP-SGS on December 16, 1985 for pulverized coal fired controlled circulation boiler, flue gas cleaning system, ash handling system and other equipment pertaining to power plant operation.

All other conditions included in this installation permit have been included in permit #1000105 through the incorporation of other applicable requirements (See section V and the remainder of section VI).

4. Installation Permit Number 1205

This installation permit was issued to TEP-SGS on March 3, 1988 to install Unit 3 of the Springerville Generating Station - 350 MW coal fired electric generating station.

Note: Unit 3 has never been constructed.

5. Operating Permit Number 0354-87

This operating permit was issued to TEP-SGS on December 30, 1986 for Unit 1 operation. Ambient monitoring requirement are similar to operating permit number M010060P4-99.

All other conditions included in this installation permit have been included in permit #1000105 through the incorporation of other applicable requirements (See section V and the remainder of section VI).

6. Operating Permit Number 0361-89

This operating permit was issued to TEP-SGS on March 3, 1988 for Unit 1 operation. Some of the relevant conditions of this permit are similar to operating permit number M010060P4-99.

All other conditions included in this installation permit have been included in permit #1000105 through the incorporation of other applicable requirements (See section V and the remainder of section VI).

7. Operating permit # M010060P4-99

This operating permit was issued in 1994 to operate Unit 1 and Unit 2.

The following conditions have been carried over into permit #1000105.

a. Ambient Air Monitoring:

Section VI of this operating permit has the following requirements for ambient air and meteorology monitoring:

- (1) *“Permittee shall maintain and operate ambient monitoring equipment to collect PM_{10} , NO_x , SO_2 , wind speed, and wind direction data at the following locations:*

<u>Type of Monitor</u>	<u>Location</u>
<i>Wind Speed and wind Direction</i>	<i>Springerville Airport</i>
<i>PM_{10}, NO_x and SO_2</i>	<i>Coyote Hills, AZ</i>
<i>PM_{10}</i>	<i>Plant Site #4"</i>

- (2) *“Permittee shall maintain a file of all PM_{10} , NO_x , SO_2 , wind speed, and wind direction measurements; quarterly reports; calibration records; and quality control/quality assurance activities for the PM_{10} , NO_x , SO_2 , and wind speed/direction monitors for a minimum of five years from the date of collection of such information or generation of reports.”*

b. Fuel Type

Section VII of this operating permit has the following requirements for fuel type:

- (1) *“Permittee may burn coal, Number 2 fuel oil in Units 1 and 2 and Number 2 fuel oil in the auxiliary boiler. Hazardous waste or Hazardous Waste Fuel as defined by A.R.S. §49-421 may not be burned at the Springerville Generating Station.”*

(2) *“Permittee may burn on-specification used oil or on-site generated on-specification used oil (on-spec used oil) along with coal in the Unit 1 if the following conditions are met:*

(a) *The flash point of the on-spec used oil does not fall below 100 degrees Fahrenheit.*

(b) *Permittee shall comply with all applicable requirements of A.R.S. §49-801 through §49-815 - Management of Used Oil.*

(c) *A representative sample from each source of used oil or used oil fuel shall be tested for arsenic, cadmium, chromium, lead, and PCBs used approved EPA Methods prior to burning.*

(d) *All tests shall be documented and a report submitted to the Department on a quarterly basis..*

(e) *The on-spec used oil must not contain contaminants in excess of the following levels:*

<i>Arsenic</i>	<i>5 ppm</i>
<i>Cadmium</i>	<i>2 ppm</i>
<i>Chromium</i>	<i>10 ppm</i>
<i>Lead</i>	<i>100 ppm</i>
<i>PCBs</i>	<i>2 ppm</i>

(f) *Permittee shall operate the Springerville Generating Station with the equipment necessary, and maintain such records as required, to document the above used oil fuel use. Records of the quantity of used oil fuel burned each day and corresponding used oil testing reports shall be maintained at least two years.”*

All other conditions included in this operating permit have been included in permit #1000105 through the incorporation of other applicable requirements (See section V and the remainder of section VI).

8. Permit Number 1000140

This administrative amendment to Air Quality Control Permit #M010060P4-99 was issued on May 25, 1995. This permit is to revise permit cover sheet that presents

Tucson Power Company as the owner/principal, rather than Tucson Electric Power Company/Wilmington Trust Company in Air Control Permit M010060P4-99.

9. Permit Number 1000214

This administrative amendment to Air Quality Control Permit #M010060P4-99 was issued on October 19, 1995 for correcting the typographical error in Air Control Permit M010060P4-99.

10. Permit Number 1000261

This administrative amendment to Air Quality Control Permit #M010060P4-99 was issued on December 8, 1995. This permit amendment revises the schedule for performance testing on the auxiliary boiler is required. The permit condition has been modified by this administrative amendment to require performance testing after 1000 hours of operation in a calendar year. In order to keep track of the hours this boiler has been operated, a record keeping requirement has also been added.

All other conditions included in this installation permit have been included in permit #1000105 through the incorporation of other applicable requirements (See section V and the remainder of section VI).

11. Permit Number 1000662

This significant permit revision to Air Quality Control Permit #M010060P4-99 was issued to TEP on December 16, 1997 for Phase II Acid Rain Permit. The effective date of this permit shall be the date the initial Title V permit becomes effective, or January 1, 2000, whichever is earlier.

All other conditions included in this installation permit have been included in permit #1000105 through the incorporation of other applicable requirements (See section V and the remainder of section VI).

VII. PERIODIC MONITORING

Units 1 and 2

Opacity: The units are subject to an opacity standard of $\leq 15\%$. The Permittee is required to operate a continuous monitoring system for opacity at all times when the units are in operation. The system is required to meet the requirements of 40 CFR §60.13, 40 CFR §60 Appendix B- Performance Specification 1, and 40 CFR §75.

PM: The units are subject to a PM standard of 0.034 lb/MMBtu. The performance test results indicate that the units are able to meet the standard. Please see the section

on testing in this technical remarks document. Table 4 compares the PTE, allowable emissions, test data, and actual emissions for these units. This permit requires a stack test every year plus periodically monitoring stack opacity to fulfill the periodic monitoring requirements for particulate matter emissions.

Although no data is available to directly correlate opacity to particulate matter emissions, doing so might indicate potential problems with the air pollution control device. If corrective actions are taken to rectify the problems associated with the pollution control device, then compliance can be inferred on the basis that the source operates its pollution control equipment in a manner consistent with good air pollution control practices. The permit requires a 24-hour rolling average opacity of 12% beyond which corrective actions need to be investigated. The opacity limit is 15% for this source. Opacity above 12% 24-hour rolling average but less than 15% does not hold the source in violation of the particulate matter standard or opacity standard, but merely requires the source to identify and alleviate the problem if possible. However, not taking corrective actions if problems with the pollution control equipment are found could potentially hold the source in violation of the permit terms.

SOx: The units are subject to a sulfur dioxide standard of 0.690 lb/MMBtu heat input . The performance test results indicate that the units are able to meet the standard. Table 4 compares the PTE, allowable emissions, test data, and actual emissions for these units.

The Permittee is required to operate a continuous emissions monitoring system (CEMS) for recording emissions of sulfur dioxide. The CEMS will be used as the periodic monitoring method. The monitoring system is required to meet the requirements of 40 CFR 60.13 and 40 CFR 75, Appendix A and B. In addition to the periodic monitoring using continuous emission monitors, the Permittee is required to perform an annual EPA Reference Method 6 or 6C test on the stacks of each unit.

NOx: The units are subject to the NOx standard of 0.697 lb/MMBtu heat input. Performance test results indicate that the units are able to meet the standard. Table 4 compares the PTE, allowable emissions, test data, and actual emissions for these units.

The Permittee is required to operate a continuous emissions monitoring system (CEMS) for recording emissions of nitrogen oxides. The CEMS will be used as the periodic monitoring method. The monitoring system is required to meet the requirements of 40 CFR 60.13 and 40 CFR 75, Appendix A and B. In addition to the periodic monitoring using continuous emission monitors, the Permittee is required to perform an annual EPA Reference Method 7 or 7E test on the stacks of each unit.

Auxiliary Boilers:

Opacity: The boiler is subject to the opacity standard of 15% in A.A.C. R18-2-724.J. This unit burns Number 2 fuel oil. The Permittee is required to monitor and record opacity according to the following schedule:

1. If Number 2 fuel oil is burned continuously for a time period greater than 48 hours but less than 168 hours, then one EPA Method 9 reading is required.
2. If Number 2 fuel oil is burned continuously for a time period greater than 168 hours, then for each 168 hour period, one EPA Method 9 reading is required.

The Permittee is required to record the dates and hours of operation of the boiler. The 48 and 168 hour intervals were established in meetings with the stakeholders. These hour intervals are of particular importance to the stations where there may not be a certified opacity observer to conduct observations during weekends, holidays, etc.

PM: The unit is also subject to the particulate matter emissions standard in A.A.C. R18-2-724.C.1. The Permittee is required to monitor the heating value and ash content of the fuel. This information is located in the contractual agreement with the liquid fuel vendor.

Although ash content by itself is not a valid measure of particulate matter emissions, monitoring it would help the agency to “ballpark” the particulate matter emissions. No engineering estimation using ash content is prescribed in the permit since it could be interpreted to incorrectly correlate particulate matter emissions to ash content only. The Permittee is required to keep on record a copy of the contractual agreement.

SOx: The boiler is subject to the sulfur dioxide standard in A.A.C. R18-2-724.E. When No.2 diesel fuel oil is burned, the Permittee is required to keep on record the fuel supplier certification which includes the following information:

1. The name of the oil supplier;
2. The sulfur content and the heating value of the fuel from which the shipment came; and
3. The method used to determine the sulfur content of the oil.

The Permittee is required to make engineering calculations for SOx emissions using the information from above according to the following equation for each fuel delivery:

$$\text{SO}_2 \text{ (lb/MMBtu)}$$

$$= \frac{2.0 \times [(\text{Weight percent of sulfur}/100)] \times [\text{Density (lb/gal)}]}{[(\text{Heating value (Btu/gal)})] \times [1 \text{ MMBtu}/1,000,000 \text{ Btu}]}$$

Although PTE of SO₂ is more than 100 ton/yr, firing of the auxiliary boiler is rare. The boiler is only used to cold start-up the two units. Therefore, no testing is required.

NOx: There is no applicable standard and hence no monitoring is required. Also, the unit does not have the potential to be a major emission unit i.e., it cannot emit more than 100 tpy of NOx. Hence, no testing is required.

Cooling Towers 1 and 2

Opacity: The cooling towers are subject to the opacity standard of 40% under the general visible emissions rule in A.A.C. R18-2-702.B.

PM: The units are also subject to particulate matter emissions standard in A.A.C. R18-2-730A.1.

Coal Preparation Plant

Opacity: The units are subject to the 20% opacity standard in 40 CFR 60, Subpart Y. The permittee is required to make a weekly survey of the visible emissions from the coal preparation plant. The permittee is required to create a record of the date on which the survey was taken, the name of the observer, and the results of the survey. If the visible emissions do not appear to exceed the standard, the permittee would note in the record that the visible emissions were of low opacity, and it did not require a Method 9 to be performed.

If the permittee finds that on an instantaneous basis the visible emissions could be in excess of 20% opacity, then he is required to make a six-minute Method 9 observation. If this observation indicates opacity in excess of 20% then the permittee is required to report it as excess emissions. In addition, the Permittee is required to adjust the process equipment or process control equipment to bring the opacity below 20%. If the permittee finds that the visible emissions is less than 20% opacity, then the permittee is required to record the source of emission, date, time, and result of the test.

Lime Handling

Opacity: The lime handling plant is subject to the 40% opacity standard in A.A.C. R18-2-702.B.1. The Permittee is required to make a weekly survey of the visible emissions from the entire lime plant including all the exposed transfer points, the storage pile, and the baghouse exhaust. The permittee is required to create a record of the date

on which the survey was taken, the name of the observer, and the results of the survey. If the visible emissions do not appear to exceed the standard, the permittee would note in the record that the visible emissions were of low opacity, and it did not require a Method 9 to be performed.

If the Permittee finds that on an instantaneous basis the visible emissions could be in excess of 40% opacity, then he is required to make a six-minute Method 9 observation. If this observation indicates opacity in excess of 40% then the Permittee is required to report it as excess emissions. In addition, the Permittee is required to adjust the process equipment or process control equipment to bring the opacity below 40%. If observer finds that the visible emissions are less than 40% opacity, then the Permittee is required to record the source of emissions, date, time, and result of the test.

PM: The lime handling plant is subject to the particulate matter standard in A.A.C. R18-2-730.A.1.a and b. The Permittee is required to maintain and operate the baghouses in accordance with the Best Management Practices. The Permittee is also required to hold these specifications on file. All emissions related maintenance is required to be recorded.

Fly Ash Handling

Opacity: The fly ash handling operation is subject to the 40% opacity standard in A.A.C. R18-2-702.B.1. The Permittee is required to make a weekly survey of the visible emissions from the entire lime plant including all the exposed transfer points, the storage pile, and the baghouse exhaust. The Permittee is required to create a record of the date on which the survey was taken, the name of the observer, and the results of the survey. If the visible emissions do not appear to exceed the standard, the permittee would note in the record that the visible emissions were of low opacity, and it did not require a Method 9 to be performed.

If the Permittee finds that on an instantaneous basis the visible emissions could be in excess of 40% opacity, then he is required to make a six-minute Method 9 observation. If this observation indicates opacity in excess of 40% then the Permittee is required to report it as excess emissions. In addition, the Permittee is required to adjust the process equipment or process control equipment to bring the opacity below 40%. If observer finds that the visible emissions are less than 40% opacity, then the Permittee is required to record the source of emissions, date, time, and result of the test.

PM: The fly ash handling operation is subject to the particulate matter standard in A.A.C. R18-2-730.A.1. The emissions from the vent of the fly ash storage silos are ducted to the flue gas system before entering the baghouses which are used to remove PM for Unit 1 and 2. Hence, there is no monitoring requirement for PM for flyash

handling.

Non-point sources

The standards in Article 6 are applicable requirements for non-point sources. The following sources will be monitored:

1. Driveways, parking areas, and vacant lots;
2. Unused open areas;
3. Open areas (Used, altered, repaired, etc.);
4. Construction of roadways;
5. Material transportation;
6. Material handling;
7. Storage piles; and
8. Stacking and reclaiming machinery at storage piles.

All of these areas must comply with the opacity limitation of 40%. The Permittee is required to minimize emissions of PM from these sources by the use of control measures such as wetting agents, watering, covering, paving, barring access etc. The Permittee is required to keep track of the kind of control measure used. Also, monitoring requirements for open burning are satisfied by keeping all open burn permits on file.

Other Periodic Activities

Abrasive Sand Blasting

TEP indicated in the permit application that there might be a few occasions on which abrasive sand blasting activities are conducted on-site. A.A.C. R18-2-726 and A.A.C.R18-2-702 (B) are applicable requirements, and as such, have to be included in the permit. Minimal monitoring requirements were required in the permit.

Spray Painting

TEP indicated in the permit application that there might be a few occasions on which spray painting activities are conducted on-site. A.A.C. R18-2-727 and A.A.C.R18-2-702(B) are applicable requirements, and as such, have to be included in the permit. A.A.C. R18-2-727(A) and A.A.C.R18-2-727(B) are included in the approved State Implementation Plan (SIP). R18-2-727(C) and R18-2-727(D) are also a part of the approved SIP. They are present in the definitions section of the SIP as R9-3-101.117. EPA approved SIP provision R9-3-527.C is not present in the amended rule. However, R9-3-527.C is an applicable requirement, and is federally enforceable until the current State SIP is approved by the EPA. Minimal monitoring requirements were required in the permit.

Mobile Sources

The Permittee is required to keep a record of all emissions related maintenance activities performed on the Permittee's mobile sources stationed at the facility. The emissions related maintenance are to be performed according to the best management practice.

Asbestos Demolition/Renovation

The Permittee is required to keep a record of all relevant paperwork on file. The relevant paperwork shall include, but not be limited to, the "NESHAP Notification for Renovation and Demolition Activities" form and all supporting documents.

Nonvehicle Air Conditioner Maintenance and/or Services

The Permittee is required to keep a record of all relevant paperwork to the applicable requirements of 40 CFR 82 - Subpart F on file.

Used Oil

Under the existing operating permit, there are no limitations on the amount or feeding rate of used oil. Pursuant to ARS 49.426 G.1, it is required to limit the amount and feeding rate of used oil.

TEP proposed that the maximum usage of used oil will be $\leq 2,500$ gallons per hour and $\leq 100,000$ gallons per year. Based on the emissions information provided in Title V permit application, the modeling was conducted to evaluate if the proposed usages meet the Arizona Ambient Air Quality Guideline (AAAQG). The modeling results show that the proposed usage meet AAAQG. Therefore, the usage of 2,500 gal/hr and 100,000 gal/yr have been incorporated into the permit condition.

VIII. TESTING REQUIREMENTS

A. Units 1 and 2

Annual performance test for opacity, particulate matter, SO₂ and NO_x are required to be conducted in accordance with 40 CFR Part 60, Subpart D.

B. Coal Preparation Plant

An initial opacity test is required to be performed at the coal preparation plant.

C. Used Oil

A representative sample of used oil shall be tested for arsenic, cadmium, chromium, and lead.

D. Cooling Towers 1 and 2

Testing is not required for the cooling towers because of the impracticability and the cost associated with the test.

E. Lime Handling

As indicated by the emissions inventory information, the actual emissions from the lime handling stacks are very low. The prescribed periodic monitoring of control equipment performance is sufficient to demonstrate that emissions are below the standard during normal operations. Therefore, testing is not being required in the permit.

F. Fly Ash Handling

Since the emissions from the vent of the fly ash storage silos are ducted to the flue gas system before entering the baghouses which are used to remove PM for Unit 1 and 2. Hence, there is no testing requirement for PM.

IX. AMBIENT AIR MONITORING

The Permittee is required to maintain and operate ambient monitoring equipment to verify compliance with the Ambient Air Quality Standards and maximum pollutant concentration increases.

X. INSIGNIFICANT ACTIVITIES

The following table includes a list of activities proposed by TEP, SGS to be insignificant. In addition, this table includes an evaluation of whether the activity can be deemed as insignificant pursuant to A.A.C. R18-2-101.54.

Table 8: List of Insignificant Activities

S. No.	Activity	Determination	Comment
1	Unit 1 and Unit 2 condensate system vents, drains and reliefs	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
2	Unit 1 and Unit 2 condensate pump vent pump A	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
3	Unit 1 and Unit 2 condensate pump vent pump B	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
4	Unit 1 and Unit 2 condensate pump vent pump C	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
5	Unit 1 and Unit 2 gland steam condenser vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j

S. No.	Activity	Determination	Comment
6	Unit 1 and Unit 2 air ejector condenser vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
7	Unit 1 and Unit 2 feedwater system vents, drains and reliefs	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
8	Unit 1 and Unit 2 feedwater heater 7 vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
9	Unit 1 and Unit 2 feedwater heater 6 vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
10	Unit 1 and Unit 2 feedwater heater 5 vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
11	Unit 1 and Unit 2 deaerating heater vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
12	Unit 1 and Unit 2 boiler feed pump A vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
13	Unit 1 and Unit 2 boiler feed pump A seal leakoff vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
14	Unit 1 and Unit 2 boiler feed pump B vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
15	Unit 1 and Unit 2 boiler feed pump B seal leakoff vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
16	Unit 1 and Unit 2 feedwater heater 3 vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
17	Unit 1 and Unit 2 feedwater heater 2 vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
18	Unit 1 and Unit 2 feedwater heater 1 vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
19	Unit 1 and Unit 2 boiler steam drum vents	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
20	Unit 1 and Unit 2 blowdown tank vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
21	Unit 1 and Unit 2 boiler emergency relief for steam	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
22	Unit 1 and Unit 2 main transformer	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
23	Unit 1 and Unit 2 main auxiliary transformer (2)	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j

S. No.	Activity	Determination	Comment
24	Unit 1 and Unit 2 excitation transformer	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
25	Unit 1 and Unit 2 generator grounding transformer	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
26	Unit 1 and Unit 2 hydrogen system vents	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
27	Unit 1 and Unit 2 stator cooling water vents	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
28	Unit 1 and Unit 2 circulating water syatem vents, drains and reliefs	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
29	Unit 1 and Unit 2 condenser vents	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
30	Unit 1 and Unit 2 condenser air removal vents	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
31	Unit 1 and Unit 2 auxiliary steam system vents, drains and reliefs	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
32	Unit 1 and Unit 2 SDA lime system water vents, drains and reliefs	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
33	Unit 1 and Unit 2 condensate tank vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
34	Unit 1 and Unit 2 cooling water storage tank vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
35	Unit 1 cooling water system vent, drain and relief	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
36	Unit 1 water/steam sampling system vent, drain and relief	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
37	Unit polish system vents, drain and reliefs	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
38	Unit 1 and Unit 2 polisher acid day tank vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
39	Unit 1 and Unit 2 polisher caustic day tank vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
40	Unit 1 and Unit 2 polisher vessel A vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
41	Unit 1 and Unit 2 polisher vessel B vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j

S. No.	Activity	Determination	Comment
42	Unit 1 and Unit 2 polisher vessel C vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
43	Unit 1 and Unit 2 chemical feed system vents, drains and reliefs	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
44	Unit 1 and Unit 2 ammonia tank vent	Yes	Total annual ammonia usage for whole facility is 1400 lbs, it is less than 10,000 lbs. There is no applicable requirement.
45	Unit 1 and Unit 2 hydrazine tank vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
46	Unit 1 and Unit 2 phosphate dissolving hopper	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
47	Unit 1 and Unit 2 phosphate day tank	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
48	Unit 1 and Unit 2 continuous emissions monitors	Yes	CEM is a monitoring system.
49	Bottom ash dewatering bin A	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
50	Bottom ash dewatering bin B	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
51	Bottom ash settling tank	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
52	Bottom ash surge tank	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
53	Lube oil system vents, drains and reliefs	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
54	Clean lube oil storage tank vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
55	emergency diesel generator	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.h
56	Auxiliary boiler system vents, drains and reliefs for steam	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
57	Auxiliary boiler deaerator vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
58	Auxiliary boiler condensate system emergency relief vents	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
59	Auxiliary boiler feedwater system emergency relief vents	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j

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S. No.	Activity	Determination	Comment
60	Auxiliary boiler steam drum emergency relief vents	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
61	Auxiliary boiler chemical feed water system vents, drains and reliefs	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
62	Auxiliary boiler chemical feed water system ammonia tank vent	Yes	Total annual ammonia usage for whole facility is 1400 lbs, it is less than 10,000 lbs. There is no applicable rule.
63	Auxiliary boiler chemical feed water system hydrazine tank vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
64	Auxiliary boiler chemical feed water system phosphate dissolving hopper	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
65	Auxiliary boiler chemical feed water system phosphate day tank	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
66	Raw water system vents, drains, and reliefs	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
67	Service water system vents, drains and reliefs	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
68	Water treatment system vents, drains and reliefs	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
69	Water treatment lime suction tanks	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
70	Water treatment influent tank1	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
71	Water treatment influent tank 2	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
72	Water treatment reactivator 1	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
73	Water treatment reactivator 2	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
74	Reactivator 1 effluent tank	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
75	Reactivator 2 effluent tank	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
76	Reactivator sludge thickener tank	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j

S. No.	Activity	Determination	Comment
77	Reactivator sludge thickener supernatant tank	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
78	Soda ash solution tanks	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
79	Coagulant aid drum	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
80	Coagulant aid solution tank	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
81	Backwash storage tank	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
82	ROSEP acid day tank	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
83	Filtered water cartridge filter	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
84	Vacuum Degasifier Vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
85	Reverse Osmosis Treated Water Tank Vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
86	ROSEP Chemical Cleaning Batch Tank	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
87	Demineralizer Cation Vessel (2) Vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
88	Demineralizer Anion Vessel (2) Vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
89	Demineralizer Mixed Bed Vessel (2) Vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
90	Demineralizer Acid Day Tank	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
91	Demineralizer Caustic Day Tank	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
92	Demineralizer Hot Water Tank	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
93	Common Condensate Tank Vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
94	Potable Water System Hypochlorite Tank	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j

S. No.	Activity	Determination	Comment
95	Potable Water Head Tank Vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
96	Potable Water System Vents, Drains and Reliefs	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
97	Polishing Demineralizer Acid Storage Tank Vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
98	Polishing Demineralizer Caustic Storage Tank Vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
99	Bulk Ammonia Storage Tank Water Treatment Acid Storage Tank A Vent	Yes	Total annual ammonia usage for whole facility is 1400 lbs, it is less than 10,000 lbs. There is no applicable rule.
100	Water Treatment Acid Storage Tank B Vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
101	Water Treatment Acid Storage Tank C Vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
102	Water Treatment Caustic Storage Tank A Vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
103	Water Treatment Caustic Storage Tank B Vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
104	Cooling Tower Acid Tank Vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
105	Cooling Tower Dispersant Tank Vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
106	Power Building HVAC System Vents, Drains and Reliefs	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
107	Service Air System Vents, Drains and Reliefs	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
108	Instrument Air System Vents, Drains and Reliefs	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
109	Yard Loop Header System Vents, Drains and Reliefs	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
110	Diesel Fire Pump for Emergency	Yes	This is only for emergency use. Insignificant pursuant to A.A.C. R18-2-101.54.h
111	Nitrogen System (Unit 1 and 2) Vents, Drains and Reliefs	Yes	It is used to prevent oxygen into the boiler. Insignificant pursuant to A.A.C. R18-2-101.54.j

S. No.	Activity	Determination	Comment
112	Hydrogen System (Unit 1 and 2) Vents, Drains and Reliefs	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
113	Polisher Resin Separation & Cation Regeneration Vessel Vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
114	Polisher Anion Regeneration Vessel Vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
115	Polisher Mixing and Storage Vessel Vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
116	Neutralizing System Vents, Drains and Reliefs	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
117	Neutralizing Tank A	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
118	Neutralizing Tank B	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
119	Oily Waste System Vents, Drains and Reliefs	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
120	Oil Waste Surge Tank Vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
121	Oil Separator Discharge Tank	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
122	Sewer System Vents, Drains and Reliefs	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
123	Building Latrine Vents	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
124	Sewage Treatment Facility	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
125	Raw Water Storage Reservoir A	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
126	Raw Water Storage Reservoir B	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
127	Makeup Water Reservoir A	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
128	Makeup Water Reservoir B	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
129	Recoverable Pond A	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j

S. No.	Activity	Determination	Comment
130	Recoverable Pond B	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
131	Cooling Tower Blowdown Pond A	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
132	Cooling Tower Blowdown Pond B	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
133	Process Waste Water Pond	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
134	Sludge Pond A	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
135	Sludge Pond B	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
136	Sludge Pond C	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
137	Sludge Pond D	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
138	Storm Water Run Off Pond #1	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
139	Storm Water Run Off Pond #2	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
140	Storm Water Run Off Pond #3	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
141	Coal Pile Run Off Pond	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
142	Ash Burial Dam	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
143	Sewage Treatment Pond A	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
144	Sewage Treatment Pond B	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
145	Evaporation Pond #1 (When dry, it is subject to A.A.C. R18-2-604)	Yes	Only water evaporates from the pond. Insignificant pursuant to A.A.C. R18-2-101.54.j
146	Evaporation Pond #2 (When dry, it is subject to A.A.C. R18-2-604)	Yes	Only water evaporates from the pond. Insignificant pursuant to A.A.C. R18-2-101.54.j

S. No.	Activity	Determination	Comment
147	Evaporation Pond #3 (When dry, it is subject to A.A.C. R18-2-604)	Yes	Only water evaporates from the pond. A.A.C. R18-2-101.54.j
148	Evaporation Pond #4 (When dry, it is subject to A.A.C. R18-2-604)	Yes	Only water evaporates from the pond. Insignificant pursuant to A.A.C. R18-2-101.54.j
149	Evaporation Pond #5 (When dry, it is subject to A.A.C. R18-2-604)	Yes	Only water evaporates from the pond. Insignificant pursuant to A.A.C. R18-2-101.54.j
150	Evaporation Pond #6 (When dry, it is subject to A.A.C. R18-2-604)	Yes	Only water evaporates from the pond. Insignificant pursuant to A.A.C. R18-2-101.54.j
151	Water Treatment Laboratory Activities	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.I
152	Coal Laboratory Activities	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.I
153	Environmental Laboratory Activities	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.I
154	General Station Maintenance Activities and Associated Equipment	No	Case by case determination
155	Natural Gas, Propane, Butane, Liquefied Petroleum Gas, Acetylene Storage Tanks and Torches	Yes	The tanks are very small size, about 20-30 gallons. Insignificant pursuant to A.A.C. R18-2-101.54.j
156	Diesel Storage Tank	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j Note: One of diesel storage tank is rated at 1 MM gals. This tank was moved to Springerville Generating Station in 1980. It is before the NSPS Subpart Kb promulgated date. Hence there is no applicable rule for this tank.
157	Diesel Unloading, Pumping and Transfer System	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
158	Gasoline Storage Tanks	Yes	The tank is 10,000 gallon and is less than cutoff size 40,000 gallon in A.A.C.R18-2-710. Therefore, A.A.C. R18-2-710 will not be applied. Insignificant pursuant to A.A.C. R18-2-101.54.b.
159	Waste Oil Drum Storage Area	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j

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S. No.	Activity	Determination	Comment
160	Waste Oil Storage Tank	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
161	Waste Storage Area	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
162	Building Housekeeping Activities	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.a
163	Site Housekeeping Activities Including Vacuum Truck and Spill Cleanup	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.a, j
164	Permitted Open Burning	No	Subject to A.A.C. R18-2-602
165	Fire Fighting Activities Including Training	No	Subject to A.A.C. R18-2-602
166	Landscaping and Site Housekeeping Activities	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.a
167	Use of Pesticides, Fumigants and Herbicides for Site Housekeeping Activities	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
168	Grounds keeping Activities	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.a
169	Industrial Vacuum Cleaners	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
170	Use of Consumer Products (Product use at site in same manner as normal consumer use)	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
171	All Paved and Unpaved Roads Except Ash Haul Roads Located Within Site Boundaries	No	Subject to A.A.C. R18-2-605
172	All Paved and Unpaved Roads Except Ash Haul Roads Located Outside Site Boundaries	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
173	Road and Lot Paving and Maintenance	No	Subject to A.A.C. R18-2-605
174	Sanding of Roadways for Safety	No	Subject to A.A.C. R18-2-605
175	Street and Parking Lot Striping	No	Subject to A.A.C. R18-2-604
176	Automobile, Station Wagon, Pickup Truck or Van Use at Site	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
177	Construction and Disturbance of Surface Areas for Purposes of Land Development (In compliance with R18-2-6 and any other applicable requirements)	No	Subject to A.A.C. R18-2-604

S. No.	Activity	Determination	Comment
178	Maintenance Activities (Activities at a source associated with the maintenance, repair or dismantlement of a emission unit or other equipment installed at the source, including preparation for maintenance, repair or dismantlement and preparation for subsequent startup, including preparation of a shutdown vessel for entry, replacement of insulation, welding, cutting, brazing, soldering and steam purging of a vessel prior to startup; also includes maintenance, repair, welding, cutting, brazing, soldering or dismantlement of buildings, utility lines, pipelines, wells, excavations, earthworks and other structures that do not constitute and emission unit)	No	Case by case determination
179	Dipping Operations (Containers, reservoirs or tanks used exclusively in dipping operations to coat objects with oils, waxes or greases).	No	A.A.C R18-2-730 may be applied
180	Medical Activities (Activities directly used in the diagnosis and treatment of disease, injury or other medical condition).	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
181	Manually Operated Equipment (Equipment used for buffing, polishing, carving, cutting, drilling, machining, routing, sanding, sawing, surface grinding or turning and associated venting hoods)	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.f
182	Individual Equipment Joints and Attachments (All flanges, piping and piping attachments, valves, pump seals, pressure relief valves, safety valves that connect or hold together piping systems or protect systems from over pressurization)	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
183	Battery Banks and Recharging Area	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
184	Plastic Pipe Welding	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
185	Painting Activities (Includes painting and preparation for painting of architectural structures and equipment for maintenance purposes)	No	Subject to A.A.C. R18-2-727
186	Steam Cleaning (Equipment used exclusively for portable steam cleaning)	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
187	Abrasive Blast Equipment as Permitted (Any blast-cleaning equipment using a suspension with water or air and any exhaust system or collector serving them exclusively)	No	Subject to A.A.C. R18-2-726
188	Pump/Motor Lubricating Oil Reservoirs, Hydraulic Oil Reservoirs, Turbine Lubricating Oil Reservoirs	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
189	Adhesive Usage Not Related to Production	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
190	Caulking Operation that are not part of production	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j

S. No.	Activity	Determination	Comment
191	Electric Motors	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
192	High Voltage Induced Corona	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
193	Safety devices (Fire extinguishers, fire suppressions systems, deluge systems)	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
194	Filter Draining	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
195	Soil gas Sampling	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
196	General Vehicle Maintenance	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
197	Carbon Dioxide System (Unit 1 and 2) Vents, Drains and Reliefs	Yes	This is only for fire quenching system. Insignificant pursuant to A.A.C. R18-2-101.54.j
198	Carbon dioxide system (Unit 1 & 2) vents, drains and reliefs	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
199	Aerosol Can Use	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
200	Cathodic Protection Systems	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
201	Cafeteria Activities	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
202	Circuit Breakers	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
203	Transportation Diesel Storage Tanks	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
204	Waste Water Storage Tank	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j
205	Oil/Water Separator Vent	Yes	Insignificant pursuant to A.A.C. R18-2-101.54.j